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# 2006 Survey of Reserve Component Spouses

## Administration, Datasets, and Codebook

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**DMDC Report No. 2006-030**
**March 2007**

# 2006 SURVEY OF RESERVE COMPONENT SPOUSES:

# ADMINISTRATION, DATASETS, AND CODEBOOK

**Defense Manpower Data Center**
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## Acknowledgments

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# 2006 SURVEY OF RESERVE COMPONENT SPOUSES: ADMINISTRATION, DATASETS, AND CODEBOOK

## Introduction

The *Human Resources Strategic Assessment Program* (HRSAP), Defense Manpower Data Center (DMDC), conducts both Web-based and paper-and-pencil surveys to support the personnel information needs of the Under Secretary of Defense for Personnel and Readiness [USD(P&R)]. These surveys assess the attitudes and opinions of the entire Department of Defense (DoD) community on a wide range of personnel issues. A Web-based survey program with postal- and e-mail notification, known as the *Status of Forces Surveys* (SOFS), provides data several times per year on active-duty and Reserve component members and DoD civilian employees. Paper-and-pencil surveys with postal- and e-mail notification are used to obtain data on sensitive topics (e.g., sexual harassment) and from populations who may have limited Internet access (e.g., spouses of active and Reserve members).

The *2006 Survey of Reserve Component Spouses* (2006 RCSS) utilized both modes of administration—the Web as well as paper-and-pen—and was designed to assess the attitudes and opinions of active-duty spouses on a wide-range of quality of life issues. Data were collected by mail and Web, between November 2005 and June 2006.[1] The sample consisted of 38,549 Reserve Component spouses. A total of 11,001 eligible spouses returned usable surveys, which represent an adjusted weighted response rate of 31.4%.

### *Overview of Report*

DMDC (2006a) provides details on sampling and weighting.

This report also documents the procedures used to develop the instrument, design the sample, conduct the survey, process the data and prepare analysis weights. Along with the survey instrument and communications to the sample members (A, B and C, respectively), the methods section includes details on how the survey was conducted.

Following the summary of the survey methodology is a description of the survey analysis file layout and key variables. Appendix D-M address key concepts required for the analysis of complex survey data and the structure of records in the survey analysis files are introduced in this section. The appendix in this report include:

- A and B – Web and paper survey instruments.
- C – Samples of all possible communications sent to sample members during the survey administration: letters, emails, and brochure.

[1] The initial survey field period closed February 9, 2006. There were 3,091 spouses incorrectly flagged as population ineligible during the original field period. DMDC elected to re-open the field from May 1- June 1, 2006 to give them an opportunity to participate.

- Conventions for variable naming and construction are provided in D (annotated questionnaire) and E (coding scheme),

- F, G, and H list the names and values of all variables in the basic-survey dataset and the Privacy-Act confidential variables.

  – F lists the variables in alphabetic order and flags the Privacy-Act confidential variables with an asterisk (*).

  – G lists the variables in the order that they appear in the dataset. Variables with the same function are grouped together, (i.e., all variables used for weighting are located together).

  – H provides a frequency for each variable with the SAS[2] values, OS flat file[3] values and SAS labels in the order that the variables appear in the dataset. In addition to the variables available on the basic-survey file, H contains details for the confidential variables that had to be suppressed to preserve the privacy of survey respondents and nonrespondents.

- I provides the record layout for the basic-survey flat file.

- The SAS code used to construct the analytic variables are included in J.

- Examples of analyses are provided in K.

- L and M lists all questionnaire items and identifies where they have been used in previous DMDC surveys of active-duty members or spouses.

# Method

## *Survey Instrument*

A copy of the 2006 RCSS Web and paper questionnaires is provided in A and B. The survey was subdivided into the following seventeen topic areas:

1. Background Information—Member's active-duty background and total years of military service; spouse military ID card and enrollment in DEERS; and spouse characteristics, including education, personal goals, race/ethnicity, U.S. citizenship, English as a second language, age, and personal experiences with the military.

2. Housing—Distance to nearest military installation and problems in gaining access to installation.

[2] SAS® is a registered trademark of SAS Institute Inc., Cary, NC, USA.
[3] The OS flat file is a text version of the dataset. The variables are in the columns and the records are in the rows. This data can be loaded into any statistical software package.

3. Your Spouse's Activations/Deployments—Member's time away from home and characteristics of activations over the past 24 months, including duration, volunteer status, deployment, and location.

4. Your Spouse's Activations/Deployments Since September 11, 2001— Member's activation and deployment history since September 11, 2001, and current activation/deployment status; number of activations; spouse preparedness for activation; advance notification; household income before, during, and following activation; health and dental care coverage; impact of activation on financial well-being; number of hours spouse worked; number, length, and location of deployment(s); means of communicating with member; coping; member's post-deployment behavior; support services received by member; spouse preparation for member's return; difficulty of spouse's readjustment to member's return; interaction with military point of contact; and military-provided support for families.

5. Effect of Deployments on Children— Emotional/behavioral impact of deployment on children and ways children cope with deployments.

6. Activation/Deployment Expectations—Reduced and extended lengths of activation/deployment, member leaving sooner than expected, and member having less time between activations/deployments than expected.

7. Preparedness— Spouse's awareness of and access to important family documents during deployments, as well as financial steps taken to prepare for deployments.

8. Feelings About the National Guard/Reserves—Overall satisfaction with the National Guard/Reserve way of life; support for member's participation; factors affecting spouse support; member's National Guard/Reserve career plans; likelihood of activation/deployment in the next year; and spouse commitment to member's staying in the National Guard/Reserve.

9. Marital History— Military membership at time of marriage, years married, satisfaction with marital relationship, and change in frequency of problems with relationship over past year.

10. Children and Legal Dependents— Number of children and legal dependents living inside or outside the home.

11. Child Care—Use of child care, primary source of child care, monthly cost of child care, days of work missed because of lack of child care, and the impact of child care issues on member staying in the National Guard/Reserve.

12. Elder Care—Number of elderly family members receiving care from spouse, whether any elderly family members live with spouse, and amount of care giving required.

13. Employment— Spouse employment status and history, reasons for not looking for work, hours worked per week, reasons for working part-time, characteristics of principal employment, and shiftwork.

14. Financial Well-Being— Financial goals, contributions of member's National Guard/Reserve and spouse's income to total household income, financial problems experienced, saving habits, and general financial condition.

15. Health and Well-Being—Perceptions of stress and social support.

16. Programs and Services—Use of, and satisfaction with, military-provided programs and services; the most likely way to learn about and use support programs and services; use of Military OneSource and the primary reason for not using it; use of, and satisfaction with, TRICARE programs and reasons for not using them; and comparisons between TRICARE and civilian health and dental plans.

17. Communicating with You (About Survey)—Preference for Web versus paper surveys and reasons for not completing the survey on the Web.

## *Sample*

The target population for the *2006 RCSS* consists of spouses of Reserve component members from the Selected Reserve in Reserve Unit, Active Guard/Reserve (AGR/FTS/AR;[4] Title 10 and Title 32), Individual Mobilization Augmentee (IMA) programs from the Army National Guard (ARNG), U.S. Army Reserve (USAR), U.S. Navy Reserve (USNR), U.S. Marine Corps Reserve (USMCR), Air National Guard (ANG), and U.S. Air Force Reserve (USAFR), who (1) have at least six months of service at the time the questionnaire is first fielded and (2) are below flag rank. In addition, at the time of the survey, for the spouse to remain eligible they must have indicated being currently married to a Reserve component member. A Reserve component member married to another Reserve component member would be eligible for the survey depending on their spouse's status, not their own. The sample consisted of 38,549 individuals; 11,001 ultimately provided usable survey responses.

### *Constructing the Frame and Drawing the Sample*

The sample frame was constructed from DMDC's March 2005 Reserve Components Common Personnel Data System (RCCPDS) and July 2005 Defense Enrollment Eligibility Reporting System (DEERS) Medical Point-in-Time Extract (PITE) if the spouses were also eligible for benefits. The actual source information for constructing the sampling frame and identifying key domains consisted of a computer accessible file totaling 418,276 spouse records. The sample drawn from the sampling frame consisted of 38,549 individuals. Table 3 presents a summary of the sample allocation by Service.

### *Stratification Variables*

The frame was stratified (divided into mutually exclusive population groups) for sampling using the six variables listed in Table 1.

[4] Names for this program vary among Reserve components: AGR/FTS/AR is a combination of Active Guard/Reserve (AGR), Full-Time Support (FTS), and Active Reserve (AR).

**Table 1.**
***Member Stratification Variables***

| Dimension of Stratification | Levels |
|---|---|
| Active Status During Prior 24 Months | Not active in prior 24 months<br>Active SOC in prior 24 months<br>De-activated in prior 23 months |
| Reserve Component | Army National Guard<br>US Army Reserve<br>US Naval Reserve<br>US Marine Corps Reserve<br>Air National Guard<br>US Air Force Reserve |
| Reserve Program | TPU/Unknown<br>AGR 10<br>AGR 32<br>Military Technicians<br>IMA |
| Paygrade Group 7 | E1-E3<br>E4/Enlisted Unknowns<br>E5-E6<br>E7-E9<br>W1-W5<br>O1-O3/Officer Unknown<br>O4-O6 |
| Race/Ethnic Category | Non-minority<br>Minority |
| Gender | Male/Unknown<br>Female |

Researchers identified population subgroups of particular interest to policy officials. These reporting domains were defined using the demographic variables shown in Table 2. Multiple versions of most of these variables were created to permit varying levels of detail for analysis and reporting.

The sample size and allocation were determined using the DMDC Sample Planning Tool (Deever & Mason, 2002). The Tool uses a formal mathematical procedure (Chromy, 1987) to determine the minimum cost (i.e., minimum size) allocation that meets precision requirements (e.g., ± 5 percentage points) imposed on prevalence estimates for key reporting domains.

**Table 2.**
***Factors Defining Key Reporting Domains (Member)***

| Factor | Levels |
|---|---|
| Active Prior 24 months and De-active Special Operations Code Prior 23 months | Not active in prior 24 Months<br>Active SOC in prior 24 Months<br>De-activated in prior 23 Months |
| Active Special Operations Code on Prior 13 to 24 Months | No ASOC 13-24 Months<br>ASOC 13-24 Months |
| Active Special Operations Code on Prior 12 Months | No ASOC 1-12 Months<br>ASOC 1-12 Months |
| Active Special Operations Codes on Prior 24 Months | Noble Eagle<br>Enduring Freedom<br>Iraqi Freedom (SOFR0309) |
| Reserve Component | U.S. Army National Guard<br>U.S. Army Reserve<br>U.S. Naval Reserve<br>U.S. Marine Corps Reserve<br>Air National Guard<br>U.S. Air Force Reserve |
| Component | Reserves<br>National Guard |
| Pay Grade Group | E1-E3<br>E4<br>E5-E6<br>E7-E9<br>W1-W5<br>O1-O3<br>O4-O6 |
| Program | TPU<br>AGR 10<br>AGR 32<br>MILTECH<br>IMA |
| Race-ethnic | Non-minority<br>Non-Hispanic Black<br>Hispanic<br>Other Race |

Within each stratum, the sample was selected with equal probability and without replacement. Sampling rates varied across the strata, so individuals were not selected with equal

probability overall. Table 3 presents a summary of the sample allocation for the total population and by gender, paygrade group, race/ethnicity, geographic region, and family status by Service.

**Table 3.**
***Sample Allocation for the 2006 Survey of Reserve Component Spouses by Member Characteristics***

| Sample | Total | Army National Guard | Army Reserve | Naval Reserve | Marine Corps Reserve | Air National Guard | Air Force Reserve |
|---|---|---|---|---|---|---|---|
| *Total* | 38,549 | 6,700 | 7,105 | 5,570 | 7,141 | 6,749 | 5,284 |
| *Activated/Deactivated* | | | | | | | |
| Not active in prior 24 months | 22,108 | 3,350 | 3,936 | 4,465 | 2,407 | 4,148 | 3,802 |
| Active SOC in prior 24 months | 515 | 100 | 56 | 25 | 191 | 111 | 32 |
| De-activated in prior 23 months | 15,926 | 3,250 | 3,113 | 1,080 | 4,543 | 2,490 | 1,450 |
| *Activated/Not Activated* | | | | | | | |
| No Active SOC 1to 24 months | 22,106 | 3,349 | 3,936 | 4,465 | 2,406 | 4,148 | 3,802 |
| Active SOC 1 to 24 months | 16,443 | 3,351 | 3,169 | 1,105 | 4,735 | 2,601 | 1,482 |
| *Race Ethnic Category 2* | | | | | | | |
| Unknown | 1,087 | 73 | 98 | 360 | 304 | 106 | 146 |
| Non-minority | 24,423 | 4,148 | 3,757 | 3,247 | 4,710 | 5,071 | 3,490 |
| Minority | 13,039 | 2,479 | 3,250 | 1,963 | 2,127 | 1,572 | 1,648 |
| *Gender* | | | | | | | |
| Male | 31,209 | 5,887 | 5,443 | 4,386 | 6,574 | 5,255 | 3,664 |
| Female | 7,340 | 813 | 1,662 | 1,184 | 567 | 1,494 | 1,620 |
| *Pay Grade Group* | | | | | | | |
| E1-E3 | 3,377 | 458 | 710 | 501 | 1,135 | 273 | 300 |
| E4/Unknown | 8,962 | 1,888 | 1,873 | 1,118 | 899 | 1,689 | 1,495 |
| E5-E6 | 7,978 | 1,295 | 1,650 | 1,092 | 1,373 | 1,853 | 715 |
| E7-E9 | 3,750 | 384 | 842 | 229 | 1,026 | 785 | 484 |
| W1-W5 | 1,328 | 720 | 249 | 62 | 297 | 0 | 0 |
| O1-O3 | 5,607 | 1,055 | 989 | 1,156 | 332 | 956 | 1,119 |
| O4-O6 | 7,547 | 900 | 792 | 1,412 | 2,079 | 1,193 | 1,171 |
| *Reserve Program* | | | | | | | |
| Unknown | 1,101 | 267 | 144 | 409 | 66 | 116 | 99 |
| TPU | 28,923 | 5,370 | 5,978 | 4,178 | 5,213 | 4,654 | 3,530 |
| AGR/TAR | 3,609 | 562 | 473 | 948 | 819 | 682 | 125 |
| Military Technicians | 2,442 | 501 | 261 | 0 | 0 | 1,297 | 383 |
| IMA | 2,474 | 0 | 249 | 35 | 1,043 | 0 | 1,147 |

*Note.* Counts for unknowns are may not be included.

## *Respondents*

### *Sample Losses*

The original sample file contained 38,549 records. Losses to the drawn sample are listed in Table 4 and reviewed here. Sample members were lost from the sample for three main reasons: (1) self-reported or other ineligibility for the survey, (2) an inability to locate the sample member, and (3) refusal to participate in the survey or other failure to respond to the survey.

A total of 2,340 sample members (9.31%) were lost from the final sample through classification as ineligible. Elimination of ineligibles resulted in decreasing the sample to 90.69% (N=34,961) of its original size.

**Table 4.**
***Final Sample Relative to Drawn Sample***

| | Sample counts | | Weighted estimates of population | |
|---|---|---|---|---|
| | n | % | n | % |
| *Drawn sample* | 38,549 | | 418,267 | |
| Ineligible on master files | -1935 | 5.02% | -19,170 | 4.58% |
| Self-reported ineligible | -1653 | 4.29% | -17,560 | 4.20% |
| Total: Ineligible | -3,588 | 9.31% | -36,730 | 8.78% |
| *Eligible sample* | 34,961 | 90.69% | 381,537 | 91.22% |
| Not located (estimated ineligible) | -164 | 0.43% | -1408 | 0.34% |
| Not located (estimated eligible) | -1,226 | 3.18% | -11,819 | 2.83% |
| Total not located | -1,390 | 3.61% | -13,227 | 3.16% |
| *Located sample* | 33,571 | 87.09% | 368,310 | 88.06% |
| Requested removal from survey mailings | -138 | 0.36% | -1,561 | 0.37% |
| Returned blank | -220 | 0.57% | -2,157 | 0.52% |
| Skipped key questions | -981 | 2.54% | -12,508 | 2.99% |
| Did not return a survey (estimated ineligible) | -2508 | 6.51% | -23,505 | 5.62% |
| Did not return a survey (estimated eligible) | -18,723 | 48.57% | -197,363 | 47.19% |
| Total: Nonresponse | -22,570 | 58.55% | -237,094 | 56.68% |
| *Usable responses* | 11,001 | 28.54% | 131,216 | 31.37% |

In general, spouses' residential addresses were used as the primary addresses of choice, followed by the members' residential addresses. In cases where residential addresses could not be identified, however, member unit addresses were used. Procedures used to locate spouse of Reserve Component members are explained in a later section that describes the Survey Control System. Because of this address update procedure, less than 3.61% of the drawn sample (1,390 of 38,549) was lost because the sample members could not be located. Personnel records for this

group had missing, incomplete, or out-of-date addresses, and steps designed to obtain complete, current addresses for these records were unsuccessful.

Losses attributable to either ineligibility or unlocatability resulted in a sample that was 87.09% of the drawn sample. Individuals in this remaining sample may be further categorized as nonrespondents versus respondents. Nonrespondents included the following groups: sample members who contacted the operations contractor (by mail, fax, e-mail, Web, or telephone) and asked to have their names removed from the survey mailing list, and 21,231 sample members who did not return a survey.

Respondents included all sample members who completed on the Web 50% of applicable questions[5]. Respondent also needed to answer the two critical questions that determined eligibility (your marital status and your spouse military status). At the conclusion of the survey fielding, 11,001 eligible, locatable sample members had returned usable surveys

### *Location, Response and Completion Rates*

Beginning in 1995, DMDC standardized its methods for calculating response rates and completion rates using procedures patterned after those advocated by the Council of American Survey Research Organizations (CASRO). CASRO noted that varying operational definitions of response rates can lead to problems or confusion (e.g., when awarding contracts requiring pre-specified response rates or when interpreting the results of a survey). As a result, CASRO formed a task force to recommend guidelines for standardizing the operational definitions of response rates. The new DMDC procedures closely follow CASRO's Sample Type II design (see Council of American Survey Research Organizations, 1982).

Table 5 provides location, response, and completion rate information. The location rate is defined as the proportion of eligible sample members that were located. The completion rate is defined as the proportion of the located sample that returned usable surveys. The response rate is defined as the proportion of eligible sample members that returned usable surveys.

**Table 5.**
***Location Rates, Response Rates, and Completion Rates***

| | **Observed Operational Rates** | **Weighted Operational Rates** |
|---|---|---|
| Location rate for eligible | 96.2% | 96.7% |
| Completion rate for eligible | 35.4% | 38.1% |
| Response rate for eligible | 34.1% | 36.8% |

[5] Applicable questions are those to be completed by all respondents and excluded items that could be skipped over depending on prior answers.

## *Survey Development and Administration*

The 2006 RCSS continues a line of research on active-duty spouses begun with the *1985 DoD Surveys of Officer and Enlisted Personnel and Military Spouses*. In 1992 and 1999, DMDC conducted subsequent Joint Service surveys of active-duty spouses. Many key topics covered by the 2006 RCSS were also included in its predecessors; however, questions have been updated, expanded, or streamlined in the 2006 RCSS. The survey was administered by both Web and paper-and-pencil questionnaires. Although both surveys largely covered the same content, the Question numbering differed. Both survey forms are in Appendix A.

The survey was hosted on the operations contractor's secure Web site so that sample members could complete the survey online. At the entry point to the survey, sample members were prompted for their personal ticket number to gain entry to the survey. The Privacy Notice and a page of frequently asked questions (FAQ's) were linked from here.

The survey allowed respondents to return to the previous page or move to the next page. In addition, buttons located below the last Question on each page allowed the respondent to clear their response(s) or save and exit the survey. Questions were answered by clicking on radio buttons, check boxes or by making a choice from a drop-down list. The respondent could change answers or could save, exit, and return at another time to change answers. The final page had another "Save and Exit" button and a "Done" button, both with full text explanation of their functions.

For those people who had not completed the questionnaire on the Web system, we mailed the paper form to sample members along with the third reminder send on December 19th 2005 (see Table 6 for more information on the mailings).

### *Survey Administration*

The survey administration process began in November 2005, with the mailout of notification letters to sample members (minus original ineligibles). The original field period was November 7, 2005, through February 9, 2006. Up to three additional postal communications were mailed to sample members throughout this field period. The survey field was re-opened on May 1, 2006, in order to communicate with 3,566 sample members originally misclassified as ineligible. During the May field period, a postal notification and one postal reminder were sent. The field closed on June 1, 2007.

In addition, sample members a valid with e-mail address on record could have received an e-mail notification plus up to eight e-mail reminders during the November-February field period. During the May field period, sample members with a valid e-mail address could have received an e-mail notification and up to four e-mail reminders. Postal and e-mail mailings stopped once the sample member returned a survey.

### *May fielding ticket miss match*

***Identified Issue:*** DRC associated incorrect Web Ticket Numbers for the re-field when preparing the postal Notification letter, dated May 1, 2006. This was discovered by DRC

approximately two weeks after the Notification letters were mailed. The mismatch resulted in Web Survey returns with incorrect Ticket Numbers.

Subsequent postal communications for the re-field provided correct Ticket Numbers. All e-mail communications for the re-field provided correct Ticket Numbers.

***Process:*** After discussions with DMDC, the following screener question was presented prior to the first survey question. This was posted May 18, 2006 at 11:06 AM CDT.

> Did you access this survey using the Ticket Number from a postal letter dated May 1, 2006?
>
> Yes (value = 1)
>
> No (value = 2)

If the Next Page button was selected without answering the question, respondents received a reminder pop-up that it had not been answered. After one reminder, respondents were allowed to advance to Question 1 of the survey.

***Analysis:*** There were 179 Web survey returns (165 complete and 14 partial.)

- Using the screener question, the survey submit date (SRDATE), and presence of an e-mail address, DRC determined the correct data match for 159 Web returns.
- There were 20 returns that the source could not be identified. These returns were designated as .B in the dataset.
- The variable created for these returns was MIS_MTCH where
  - . = not mis-matched
  - 0 = Corrected Ticket
  - 1 = Recodes Un-Matchable

**Table 6.**
***Mailing Timeline and Return Results***

| Mailing Numbers and Groups | Print File Creation Date* | Mail Drop Date | Number Sent | Number of PNDs |
|---|---|---|---|---|
| Notification Domestic | 10/28/05 | 11/7/05 | 32,631 | 2,051 |
| Notification Foreign | 10/28/05 | 11/7/05 | 72 | 21 |
| Notification Domestic Reminder 1 | 11/22/05 | 11/21/05 | 748 | 122 |
| Notification Foreign Reminder 1 | 11/22/05 | 11/21/05 | 26 | 8 |
| *Subtotal: Notification* | | | *33,477* | *2,202* |
| Reminder 1 Domestic | 11/28/05 | 12/1/05 | 31,128 | 1,459 |
| Reminder 1 Foreign | 11/28/05 | 12/1/05 | 96 | 49 |
| Reminder 1 Domestic Re-mail 1 | 12/6/05 | 12/7/05 | 706 | 108 |
| Reminder 1 Foreign Re-mail 1 | 12/6/05 | 12/7/05 | 76 | 43 |
| *Subtotal: Reminder 1* | | | *32,006* | *1657* |
| Reminder 2 Domestic | 12/9/05 | 12/14/06 | 28,389 | 793 |
| Reminder 2 Foreign | 12/9/05 | 12/14/06 | 162 | 96 |
| Reminder 2 Domestic Re-mail 1 | 12/16/05 | 12/19/06 | 305 | 51 |
| *Subtotal: Reminder 2* | 12/16/05 | 12/19/06 | *25* | *13* |
| Reminder 3 Domestic | | | 28,881 | 953 |
| Reminder 3 Foreign | 12/19/05 | 1/5/06 | 27,112 | 597 |
| Reminder 3 Domestic Re-mail 1 | 12/19/05 | 1/5/06 | 148 | 72 |
| Reminder 3 Foreign Re-mail 1 | 1/10/06 | 1/11/06 | 662 | 102 |
| Reminder 3 Domestic Re-mail 2 | 1/10/06 | 1/11/06 | 34 | 13 |
| *Subtotal: Reminder 3* | 1/16/06 | 1/17/06 | *10* | *4* |
| Reminder 4 Domestic | | | 27,966 | 788 |
| Reminder 4 Foreign | 1/19/06 | 1/26/06 | 23,181 | 170 |
| Reminder 4 Domestic Re-mail 1 | 1/19/06 | 1/26/06 | 84 | 10 |
| Reminder 4 Foreign Re-mail 1 | 1/30/06 | 1/31/06 | 168 | 2 |
| *Subtotal: Reminder 4* | 1/30/06 | 1/31/06 | 4 | 0 |
| May 2006 Notification Domestic | | | 23,437 | 180 |
| May 2006 Notification Foreign | 4/25/06 | 5/1/06 | 3,518 | 272 |
| *Subtotal: May 2006 Notification* | 4/21/06 | 5/1/06 | *33* | *23* |
| May 2006 Reminder 1 Domestic | | | 3,551 | 295 |
| May 2006 Reminder 1 Foreign | 5/10/06 | 5/15/06 | 3,481 | 250 |
| May 2006 Reminder 1 Domestic Re-mail 1 | 5/10/06 | 5/15/06 | 33 | 12 |
| May 2006 Reminder 1 Domestic Re-mail 2 | 5/22/06 | 5/23/06 | 134 | 5 |
| *Subtotal: May 2006 Reminder 1* | 5/22/06 | 5/23/06 | 7 | 1 |
| | | | *3,658* | *268* |

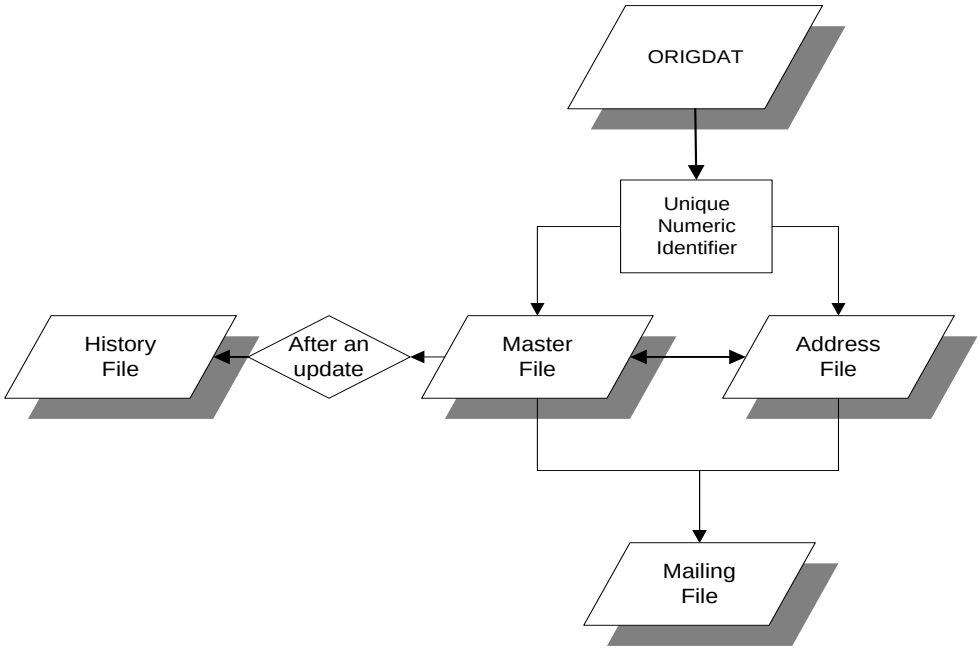
*Print file creation date: This is the date records were identified for inclusion in the mailing and written to a print file.

### *Survey Control System*

The Survey Control System (SCS)[6] was used to monitor the data collection process and to track all data transactions over the course of the survey administration. The datasets in the SCS include sample members' names and addresses, but do not contain data obtained from the survey instruments. Because of privacy concerns, SCS datasets are not available for basic release.

The operations contractor uses the SCS to store and update project data, monitor mailings, respond to documents returned as postal non-deliverables (PNDs), and determine survey participation and eligibility status. The SCS consists of five datasets: the ORIGDAT file, the ADDRESS file, the MASTER file, the HISTORY file, and the MAILING file. Figure 1 displays the relationships among those datasets.

**Figure 1.**
***Survey Control System***




***ORIGDAT file.*** The ORIGDAT file consists of 38,549 records, one record for each member of the sample. It is the original sampling frame file sent to the operations contractor by DMDC. The original file is loaded onto the operations contractor's computer system and converted to a SAS dataset. As the file was converted into a SAS dataset, the SCS generated a

[6]The *SCS* refers to the set of data files as well as the program or operating system which maintains those files.

unique identification number (INRECNO) for each record. This number identifies the sample member throughout the SCS and also in returns data sets, comment text files and other specify text files. The names and some demographic data from the ORIGDAT file were loaded into the MASTER file in preparation for the first mailing. The addresses from the ORIGDAT file were loaded into the ADDRESS file.

***ADDRESS file.*** The ADDRESS file tracked the postal and e-mail addresses that were maintained for each sample member. The ADDRESS file contains one record for each postal and address for each sample member (e.g., if there were five addresses located for one sample member during the survey administration, that sample member has five separate records in the ADDRESS file) yielding an ADDRESS file containing 164,819 records. Each record is uniquely identified by the combination of INRECNO (identifying the sample member) and an address number (ADDRNO) assigned to each address. This address number is the sequential order of receipt of the address for a particular sample member. For example, if a sample member has one address record in the ADDRESS file, the address number for that record is one. If the sample member faxed in a change of postal or e-mail address or a credit bureau forwarded an updated postal address for that sample member, the new address was added as address number two. The ADDRESS file was initially loaded with postal and e-mail addresses from the ORIGDAT file. Each record in the ADDRESS file includes the sample member's INRECNO, address, the source of the address, and address priority code, a variable indicating whether the record is the highest priority address for this sample member, and variables indicating whether the address successfully reached the sample member.

The priority code assigned to a given address number for a sample member was used to determine the "best" or "highest priority" address for the sample member at any given time. It was originally determined by the source of the address. Address updates obtained directly from a sample member received a priority number of one. The order of priority of address sources from "highest priority" to "lowest priority" is as follows, respectively:

1. updates directly from a sample member (call, fax, e-mail, Web update or letter)

2. address corrections from the U.S. postal service (ACS [electronic address change service], ACRs [address correction requests], and ODFs [out-of-date-forwarded mail])

3. NCOA-updated addresses

4. credit bureau-updated addresses

5. DEERS residential addresses

6. DEERS unit addresses

***MASTER file.*** The MASTER file is used by the SCS to select records for upcoming survey mailings. This file includes a record for each member of the sample and was initially created by extracting data from each record in the ORIGDAT file. Each MASTER record includes the sample member INRECNO and the address number for the highest priority postal and e-mail address in the ADDRESS file for this sample member. The MASTER file accommodated data updates through an automated process (e.g., updating the address number in

use after the receipt of a postal or e-mail nondeliverable or Web update) or manual key entry (e.g., updating information in response to a telephone call, fax, letter return or e-mail from a sample member). As new information was received for a particular record (including changes to the highest priority address), the SCS updated the MASTER record (N=38,549) and wrote the old record to the HISTORY file. The MASTER file also contains a set of variables which summarize the sample member's mailings status.

***HISTORY file.*** The HISTORY file is a chronicle of the changes that occurred to the MASTER file. Each HISTORY record is a subset of an outdated MASTER record with the addition of a date and time stamp as the record is updated. That is, a HISTORY record is created when there is a name, address, paygrade, or eligibility status change in the MASTER file. Thus, the HISTORY file contains as many observations as there are updates to the MASTER file.

***MAILING file.*** The MAILING file tracked all survey mailings (postal and e-mail). This file contains one record for either an item postal mailed or e-mailed during the survey administration or for tracking postal address updates from credit bureaus (N=153,219). Each MAILING record includes the INRECNO, address number used, date of mailing, mailing status, type of mailing, and the mailing identification code (MIC).

## *Address Update Procedures*

### *Initial Address Updates*

Prior to the first mailing, the operations contractor ensured all domestic residential addresses were formatted to conform to U.S. Postal Service standards. Once the addresses were standardized, they were sent to an outside vendor where they were checked against the National Change of Address (NCOA) database. The NCOA software updated the address records (in standardized format) based on change-of-address cards filed with the U.S. Postal Service. The updated NCOA address file was returned to the operations contractor and integrated into the SCS. The NCOA-updated addresses were added to the ADDRESS file and became the current ADDRNO with the "highest priority code assigned" in the MASTER file.

After the NCOA-updated data was added to the SCS, another file was compiled of sample members who had an incomplete address or an address identified by NCOA as an undocumented move (i.e., the sample member had moved, but NCOA did not have a new address). The operations contractor sent copies of this file to three credit bureaus (Experian, Trans Union and CSC Credit Services)[7] to determine whether a complete, up-to-date address for these sample members could be found. The results were integrated into the SCS, updating records in the ADDRESS file.

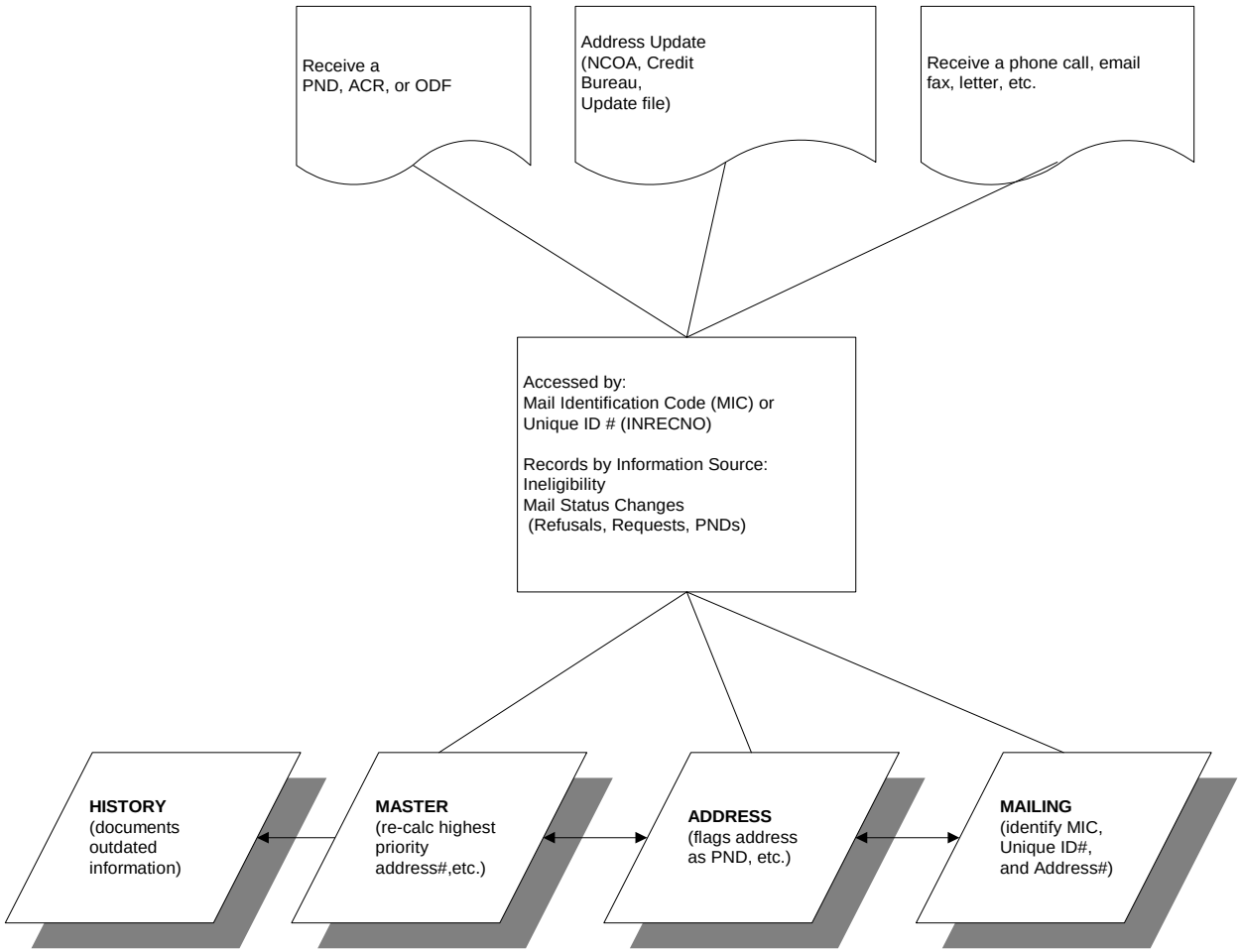
### *Ongoing Address Updates*

Address update procedures also occurred when (a) additional address records were received after NCOA processing, (b) a survey document was returned as undeliverable, (c) a

[7]Experian, Trans Union and CSC Credit Services are outside vendors with consumer-credit information databases. Social security numbers of sample members with incomplete or out-of-date address information were forwarded to the vendors for address updates when the mailing dataset contained no valid address.

sample member self-reported a name, rank, or address change, or (d) the U.S. Postal Service forwarded address correction information. Figure 2 outlines these procedures.

**Figure 2.**
***Address Updating Procedures***




As a new address was entered into the ADDRESS file, its source (NCOA, credit bureau, postal Address Correction Requested card, telephone call, fax, letter, Web, or e-mail) was recorded and a new address number was assigned. The priority assigned to the address was based upon the source of the update and the date and time of the address (see the description of priority, for the ADDRESS file). At any given time, the current address used corresponded to the address number with the highest priority code.

If all known addresses for a sample member were returned Postal Non-Deliverable Mail (PND), the sample member's record in the MASTER file was flagged "no address available." All "no address available" records were forwarded to the three credit bureaus. The credit bureaus returned files containing addresses for each submitted record, with the date on which the credit bureau received the address. If more than one address for a sample member was received from credit bureaus, the address number corresponding to the address with the most recent receipt date received the highest priority code. If one or more of the credit bureaus returned a previously unattempted address, the MASTER and ADDRESS files were updated and a re-mail was sent to the sample member. If none of the vendors had an updated address for the sample member, the operations contractor designated the sample member "nonlocatable" and stopped further mailings.

## *Processing of Updates*

### *Updates from Sample Members*

Sample members could provide an updated address in a variety of ways. Updates from sample members could be communicated via the toll-free telephone number (either by speaking to the operations contractor's Call Center staff or by leaving a voice mail message). In addition, sample members could mail, fax, e-mail or the survey Web site all updated information was entered into the SCS. Updates made on the Web site were loaded directly into the SCS before the start of the survey; once the survey fielding period stared, the Web update page was no longer available. Other updates were entered into the SCS by the operations contractor's Call Center staff by the close of business on the day following receipt of the update.

### *Updates from the U.S. Postal Service*

There are several types of address updates provided by the postal service. They are detailed below; each includes a description of the processing steps.

1. Postal Non-Deliverable Mail (PND): The sample member moved and no forwarding address was available. The mail piece was returned to the operations contractor. The operations contractor removed the letter from the envelope and scanned it to capture the Mailing Identification Code (MIC) in the lower right corner. A file of the MICs was loaded to the SCS so the records could be updated as PND. This was done as necessary to coincide with the mailing/re-mailing schedule. If sample member had another address on file (e.g., the unit address), that address was used for the next mailing for the next mailing. If no alternate address was on file, the Social Security Number was sent to the credit bureaus in search of a new address.

2. Address Change Service (ACS; electronic): About six weeks prior to the first mailing, the operations contractor applied to the postal service for the ACS. The postal service assigned a participant code, which was placed in the address block of the letter. The operations contractor requested semi-weekly files, which the postal service provided on diskette via Express Mail. The operations contractor loaded the files upon receipt or before another mailing was prepared.

3. Address Correction Requests (ACR; hard-copy): The outbound envelopes contained the endorsement "Address Service Requested." The post office provided the corrections via hard copy cards that were sent to the operations contractor. The corrections were entered into the SCS by the operations contractor's Call Center staff, typically by close of business the next day but no later than prior to the preparation of the next mailing.

### *Survey Materials and Their Distribution*

Each eligible sample member received at most four original mailings: a notification letter and brochure explaining the survey program, a reminder letter, a reminder letter with a paper survey and a third reminder letter. The notification and reminder letter mailings contained a letter, except for the second reminder which contained a letter, paper survey and business reply envelope. All letters included information about using the Web as an option to complete the survey.

In addition, e-mail was used to communicate with sample members. Not every sample member had an e-mail address. However, those sample members for whom we had an e-mail address received an e-mail announcement and up to eight e-mail reminders. Samples of the letters and e-mail communications are provided in C.

### *General Mailing Procedures*

Prior to every mailing, the SCS searched the records in the MASTER file to identify which records should be excluded (e.g., sample members self-reported as ineligible for survey participation, sample members who had already returned survey forms, and members with no valid addresses available). For re-mails (sent between mailings), the SCS identified only those records that had been updated since the prior mailing. More specifically, the SCS identified records that had resulted in PNDs or had been manually flagged for re-mailing (e.g., in response to a sample member calling the operations contractor stating she or he had received a reminder/thank you letter but had not received a survey, etc.).

Once all records for a particular mailing or re-mailing were identified, the SCS processed the records based on whether the mailing would include a brochure and/or a survey form. If the mailing group was large enough to lead to a cost savings from sorting, the records were run through Group 1 postal software to sort the records according to first-class presort postal regulations. After this procedure, a unique Mail Identification Code (MIC) was assigned to each record. The MIC was assigned either from the survey litho code list if a survey form was sent or independently if only a letter was sent.

### *Ticket Numbers for Web Survey Access*

Prior to the first mailing, a list of ticket numbers[8] for Web survey access was randomly generated. One secure ticket number was assigned to each sample member and remained linked to that member for the duration of the project. That is, while a member's MIC or lithocode changed with each mailing as described previously, the member's ticket number did not change.

[8] Ticket numbers are eight alpha numeric characters generated at random.

The member's unique ticket number was printed (along with the survey URL) in each letter and e-mail sent to that individual. A member could not access the Web survey without using his or her ticket number.

### *Description of Letters*

Letters were printed with the record's unique MIC listed in the address field and on the lower right corner of the letter. If the mailing included only letters (no brochures or survey forms), the letters were folded and machine inserted into window envelopes and sent by first class mail. Mailings that included a brochure or a survey followed the same procedure through the letter printing process. The MIC on the cover letter was used to pair the letter with the correct enclosure. During the matching process, ten percent of the mailing was visually checked, comparing numbers printed on the letter with the brochure or survey number for quality control. Any mismatched pairs initiated further investigation of the matching process. This procedure ensured that each brochure or survey was sent to the person designated to receive it. Depending on the sample size, the letters and matched enclosures were machine or hand inserted into envelopes, metered if necessary, and sent by first class mail.

The status of each mailing was tracked throughout the data collection so that address-correction information could be incorporated into all relevant mailings. When a mail piece came back PND, the next mail piece was sent to a new address (if one could be obtained during the mailing period). For all mail pieces that came back PND, re-mails were completed if a newer/updated address could be found.

DMDC provided the operations contractor with the text, letterhead and signature for the cover letters. The letters explained why the survey was being conducted, how the survey information would be used, and why participation was important. See C for copies of the letters. The letters were approved and printed on letterhead from the office of the Under Secretary of Defense and signed by the Under Secretary of Defense (Personnel and Readiness), David S.C. Chu. The letterhead and signature were printed in blue, and the text and recipient information of all letters were printed in black. In addition to including a name and address (which was also used as the mailing information for the window envelopes), each letter included a personalized salutation. The salutation addressed each sample member by his/her gender. For example, a letter to an Active Duty spouse would have included the salutation, "Dear Mrs. Smith."

### *Mailouts*

Table 6 lists the mailing dates and return results for each of the mailouts and re-mailings. For the main notification mailing, sample members were sent a letter and brochure notified sample members that they were selected for this survey and encouraged their participation. The notification letter was mailed to 32,703 sample members on November 7, 2005.

The first reminder letter was sent to 31,224 sample members on December 1, 2005. The letter, thanked sample members for completing the survey if they had done so, and reminded them to complete the survey if they had not. The second reminder letter was sent to 28,551 sample members on December 14, 2005. The letter again thanked sample members for

completing the survey if they had done so, and reminded them to complete the survey if they had not.

The third reminder mailing provided sample members the option to complete a paper survey. For this mailing, a letter, paper survey and a folded business reply envelope were provided. The survey packet was mailed to 27,260 sample members on January 5, 2006.

The fourth postal reminder letter was sent to 23,265 sample members on January 26, 2006. The letter thanked sample members for completing the survey if they had done so, and reminded them to complete the survey if they had not.

The field was re-opened on May 1, 2006, as stated earlier. The second notification packet was sent to sample members initially flagged as ineligible and offered sample members the option to complete the survey on paper or on a secure Web site. For this mailing, a letter, paper survey, brochure and business reply envelope were provided. This packet was mailed to 3,551 sample members on May 1, 2006.

A reminder letter was sent to 3,514 sample members on May 15, 2006. The letter thanked sample members for completing the survey if they had done so, and reminded them to complete the survey if they had not.

E-mail was used to communicate with sample members. E-mail addresses were purchased from an outside vendor. The outside vendor maintains a customer database of e-mail addresses that has been lawfully collected and compiled from consumers pursuant to a notice that advised them that their personal data was being collected. Table 7 below shows the percent of sample members by Service for whom at least one valid e-mail.

**Table 7.**
***E-mail Address Availability by Service***

| | Army National Guard | Army Reserve | Navy Reserve | Marine Corps Reserve | Air National Guard | Air Force Reserve | Total |
|---|---|---|---|---|---|---|---|
| Valid address available | 14% | 15% | 14% | 14% | 15% | 14% | 14% |
| No valid address available | 86% | 85% | 86% | 86% | 85% | 86% | 86% |

Sample members with e-mail addresses received at most an e-mail notification and eight reminders. Table 8 lists the e-mail dates and e-mail addresses bounced. E-mail addresses "bounced" identifies the address was invalid at the time DMDC attempted contact. This is analogous to a postal PND. E-mail address "sent" is not the same as e-mail received. It is analogous to the non-PND return experienced during a mailed survey. It is not known if the mail was delivered to the intended individual, only that it was not returned.

**Table 8.**
***E-mail Communication Timeline***

| Communication Type | E-mail Drop Date | Number Sent | Number Bounced |
|---|---|---|---|
| Notification | 11/21/05 | 6486 | 10215 |
| Reminder 1 | 11/28/05 | 4467 | 41 |
| Reminder 2 | 12/6/05 | 3833 | 20 |
| Reminder 3 | 12/14/05 | 3336 | 23 |
| Reminder 4 | 12/22/05 | 3054 | 15 |
| Reminder 5 | 12/28/05 | 2928 | 24 |
| Reminder 6 | 1/11/06 | 2693 | 27 |
| Reminder 7 | 1/19/06 | 2439 | 27 |
| Reminder 8 | 1/27/06 | 2306 | 0 |
| May Notification | 5/1/06 | 129 | 41 |
| May Reminder 1 | 5/5/06 | 123 | 0 |
| May Reminder 2 | 5/11/06 | 90 | 0 |
| May Reminder 3 | 5/17/06 | 86 | 0 |
| May Reminder 4 | 5/23/06 | 81 | 0 |

### *Processing Returned Surveys*

Once a respondent completes the survey, data are stored in an indexed file on the Web (data) server. Web and paper survey returns are merged into one dataset. Paper survey returns require additional work to input the data (explained below). Prior to providing each dataset to DMDC, the operations contractor copied the indexed file to their internal network using FTP protocol. The data are then converted to a sequential format, and the validate program reads and loads the data to the dataset.

All paper returned surveys were logged in and opened by the operations contractor upon receipt. If the envelope contained the survey booklet and other materials (e.g., extra comments, photographs, non-relevant items), the operations contractor separated it from the survey. Bundles of this type of correspondence (white mail) were sent to DMDC by regular surface mail or FedEx ground after all surveys were received. If the white mail appeared to be urgent, the operations contractor contacted DMDC to determine how it should be handled.

Survey booklets were batched for image scanning and assigned a batch number. The booklets were separated by pages, stacked in page/booklet, and forwarded for scanning. As the surveys were scanned, the batch number and a serial number (unique to each survey) were printed on each page of the survey.

The surveys were machine-edited for light marks, multiple marks, and alignment. Damaged forms were repaired, if possible, and scanned with non-damaged forms. If it was not possible to scan the documents, they were batched separately and key-entered.

Regardless of the mode of survey submission, the operations contractor processed all survey information according to DMDC approved administration plans and coding schemes.

### *DMDC Coding Scheme*

To convert the raw data into the item scores that appear in the data files (basic-release and confidential files), DMDC provided the operations contractor with an annotated copy of the survey form (see D) and the coding notes (see E). Every attempt is made to capture all information from completed surveys and preserve the data so that secondary analysts can later create variables that were not anticipated by DMDC researchers. To accomplish these goals, DMDC subscribes to a variety of coding conventions (see D).DMDC uses "forward" coding when coding inconsistent answers in items with skip patterns. Data on the starting Question accepted as marked and data for the items within the skip pattern are edited to be consistent with the starting question. However, an unedited version of each item is preserved in a confidential dataset.

For Web respondent, the coding scheme is used to "smart skip" respondent. This does not allow respondents to view questions that they have indicated with previous answers do not apply to them. For example, if a respondent indicated on question 18 (SR018= 1) that they had not ever tried to go to a military installation becoming a spouse of a National Guard/Reserve since then they did not see Question 19, which asks "Since becoming a National Guard/Reserve spouse, have any of the following caused you problems in gaining access to your nearest military installation?" Only those with the affirmative answer; yes, I have tried to go to a military installation are shown the questions.

### *Coding or Keying Open-Ended Items*

The Web survey contained twenty-one open-ended items. The original text responses from these items were captured verbatim into a SAS® data set that is linked by the unique identification to the survey data. The paper form had fewer open-ended items. The operations contractor keyed all verbatim. Text data in the SAS® files for open-ended items were spell-checked. Identifiers (e.g., proper names, addresses, e-mail addresses, phone numbers, locations, or social security numbers) were replaced with generic terms.

### *Fifty-Record Check*

After receiving the 5% of returned records, the operations contractor ran a "50-record check." This is a check to verify that the coding scheme and skip patters are working. DMDC checked the resulting data to determine if there were any unanticipated problems in the coding procedures (e.g., respondents were consistently answering in an unexpected manner). Minor corrections to these procedures were necessary as a result of this check and were reviewed by DMDC prior to production of the initial SAS® dataset. At the completion of the 50-record check, the operations contractor compiled the full set of returned surveys. The data were then cleaned and edited following the coding scheme.

# Survey Analysis Files

This section (a) provides an overview of requirements for analysis of the data, (b) documents the structure of survey analysis files created for the 2006 RCSS survey, (c) describes the assembly of the analysis files, and (d) provides an overview of the variables in the survey analysis files.

## *Estimation*

Analysis of this data requires use of weights to compensate for the unequal selection probabilities and to account for differential nonresponse among population subgroups. The analytic weights were poststratified to population totals so that weighted sample estimates would reflect population values.

In general, the procedures used to compute sample estimates of population parameters (including population totals, means, proportions), tests of hypotheses, regression relations, and their associated variances are derived from the probability structure that gives rise to the observations. As with other surveys involving complex probability structures, most of the parameter estimates of interest in this survey take the form of non-linear statistics. Examples include domain means and proportions where the denominator values are unknown and must be estimated from the sample data. The estimator takes the form of a ratio of random variables (i.e., the ratio of the estimated numerator and denominator totals or counts). In general, ratio estimates are not unbiased and their variances cannot be expressed in closed form. The variances are, therefore, approximated. The bias in a ratio estimate depends on the variance associated with the denominator total or count and can usually be ignored in samples having a large number of observations. As a working rule, the bias may be assumed negligible if the number of observations on which the estimate is based exceeds 30 or is otherwise large enough so that the coefficient of variation [SE(x)/x] of the denominator is less than .10 (cf., Cochran, 1977, pp. 153-165).

Two common variance estimation methods for complex sample data are linearization (Taylor series approximation) and replication. Wolter (1985) provides a detailed discussion on methods used for variance estimation from sample surveys, including Taylor series approximation and replication methods.

Many of the standard statistical software packages, such as SPSS[9] and older versions of SAS,[10] compute variance estimates only for simple random samples. Using standard statistical programs with the appropriate eligibility indicator (ELIGFLGW) and the analytic weight (FINALWGT) to analyze this data will produce accurate point estimates, but variance estimates will not account for the complex sample design. Variables have been included in the analysis file so that Taylor series estimates can be computed for a stratified without replacement design, using either SUDAAN[9] or the recently available SAS Survey Procedures.

[9] SPSS® is a registered trademark of SPSS Inc., Chicago, IL, USA.
[10] SAS added survey procedures in Version 7, expanding them in releases 8.0 and higher.

### *Data Structure*

Care was taken in the preparation of the survey analysis files to provide basic access to data from the survey with sufficient information for accurate estimations, while meeting requirements for participant and non-participant anonymity. As described below, some detailed variables have been deleted from the basic-release files either because (a) they provide too great a chance of identifying an individual or (b) they are not needed to analyze the survey data. For the latter reason, some demographic variables are available on basic files only in a collapsed version. In addition to a basic-release file, a confidential file (containing a more complete set of variables than the basic-release file) has been prepared for internal DMDC use. Files were prepared as SAS and SPSS system files. An ASCII (Operating System or OS) flat file was prepared from the basic-release SAS system file. File names are indicated in Table 9.

**Table 8.**
***Analysis File Names***

| Type of File | File Name |
|---|---|
| Basic-release File – SAS | RCSS06B.7BDAT |
| Confidential File – SAS | RCSS06C.7BDAT |
| Basic-release File - SPSS | RCSS06B.POR |
| Basic-release File – OS | RCSS06B.DAT |

The structure of the confidential file is shown in Figure 3. The confidential file contains the basic-release file plus additional confidential variables. All variables in the confidential file are documented in this report. Appendix F and G list all variables with a notation to indicate which variables are confidential and show where each variable is documented. Intermediate weighting variables that appear only in the confidential file are documented by DMDC (2006a). Variables that appear in collapsed form in the basic-release part of the file and in a fuller version only in the confidential file are discussed later.

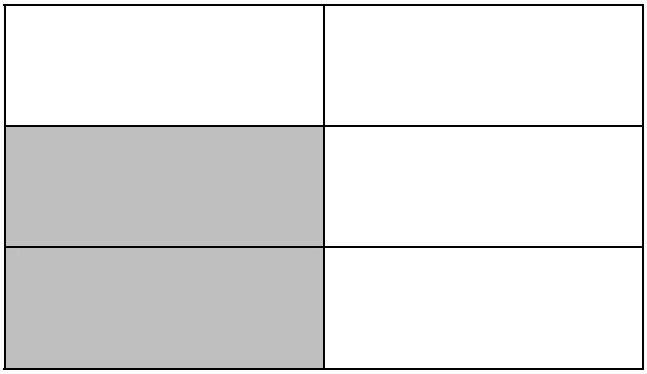
### *Analyses*

Both the confidential file and basic-release file contain 38,549 records, one for every sampled. As depicted in Figure 3, these records can be divided into 3 subgroups. The *Nonrespondents* subgroup, includes all records indicated by ELIGFLGW=3, where no usable response was received or ineligibility could not be determined (27,548).

Assignment of a record to the other two subgroups was based on whether (a) an individual returned a “completed” survey; and (b) the individual was eligible for the survey . Final eligibility was limited to those in both the March 2005 Reserve Components Common Personnel Data System (RCCPDS) and the July 2005 Defense Enrollment Eligibility Reporting System (DEERS) Medical Point-In-Time Extract (PITE) who did not contact the operations contractor to indicate that they were ineligible.

The analytic dataset should consist of records for the *Known Self- or Proxy- reported Ineligibles* and *Eligible Respondents* subgroups. Both the *Eligible Respondents* (ELIGFLGW=1) and *Known Self- or Proxy-reported Ineligibles* (ELIGFLGW=2) are included because both types of records were used for poststratification to population totals; both types of records are needed to compute accurate variance estimates by Taylor series linearization. To analyze the eligible completed responses use the analytic weight, FINALWGT, subset the file to ELIGFLGW = 1,2 (i.e., records with non-zero weights), and restrict the subpopulation for analysis to ELIGFLGW=1.

**Figure 3.**
***The Structure of the Confidential File***




Note. The shaded portion represents the subset of the data typically required for analysis.

## *Variables in the Survey Analysis Files*

### *Basic-survey Dataset*

The variables in the basic-survey dataset fall into five categories: (1) Information gathered on the survey, (2) Variables constructed for analysis, (3) Information on operations, (4) Information from sampling and record data, and (5) Information on weighting. Variables are grouped in these categories in G and H.

***Information gathered on the survey.*** These variables came directly from the survey or were constructed using only information from the survey. There is at least one variable for every item in the survey except for a few items that had to be removed to preserve confidentiality. The annotated questionnaire (see Appendix D) contains the item names, the values used to code the pre-specified alternatives, and references to applicable coding notes in E.

DMDC uses a standard naming convention for most variables. In general, the survey-derived variables can be classified as variables that begin with either "SA," "SR," or "X." The

naming of "SR" variables is reviewed using the example variable, "SR052A." For the *2006 Survey of Reserve Component Spouses*, variables names begin with "SR" to denote the population (active-duty spouse) and the survey administration year. The following three numbers correspond to the questionnaire item number. For example, the third through fifth digits indicate the main Question number (046), the sixth digit typically indicates the sub-Question item, such as (in this example) item A from a list of items in Question 46.

The "SR" variables are a set of primarily demographic items that are identically named across all DMDC surveys. The "SR" serves as a mnemonic for self-report with the remainder of the name indicating the data being collected. For example, "SRRACE" is the variable name for the item that asks sample members what race they consider themselves to be. Although all survey data are self-reported, the "SR" is used to distinguish survey-reported information from DMDC-provided information (e.g., the variable "SRRACE" from the survey is differentiated from the variable "RACE" from DMDC databases). When possible, "X" is reserved to create special crossing (marginal) variables for key analyses. "X" variables typically involve imputation for missing data and, like "SR" variables, are intended to be consistent across DMDC surveys. For more information on variable naming conventions, see Appendix E.

***Variables constructed for analysis.*** An "R" as the last letter of a variable listed in Appendix F, G, and H is an indication that the variables may have been recoded to create special analysis. Only one version of each variable is available in basic-dataset. For example, certain demographic variables, including some information collected on the survey, had to be censored to preserve the anonymity promised to survey respondents and nonrespondents. For example, SR015R is a recoding of SR015.

Certain key demographic variables were constructed for DMDC analyses. These analytic variables, starting with "X," are based primarily on self-reported information from the survey. Typically, where the self-reported information was missing on important demographics (e.g., Service, paygrade, location, or respondent gender) data were imputed from members' or spouses' administrative record.

The race and ethnicity questions were combined to be reported in accordance with the Standards for Maintaining, Collecting, and Presenting Federal Data on Race and Ethnicity (1997). Also, items were combined to derive employment indicators based on U.S. Census Bureau's Decennial Census and Current Population Survey (2002).

Appendix J documents many of the decisions made in the analyses reported by DMDC (2006b). For a large number of survey items, analysts must make decisions on the treatment of special codes (such as Not Applicable.).

***Information on operations.*** The DMDC-provided identification number, RCSS2006, is unique and is used to identify responses as they are processed. Other variables are created by the operations contractor but are too detailed to be in the basic-release file.

***Information from sampling and record data.*** Most of the variables used in sample design and selection are too detailed to be in the basic-release file (see the later section on confidential variables).

***Information on weighting.*** Derivation of weights is discussed in detail in DMDC (2006a). See Appendix K for examples of analyses using these variables:[11]

| | |
|---|---|
| ELIGFLGW | Eligibility Flag |
| FINALWGT | Final Weight with Non-response and Postratification Adjustments |
| V_STRAT | Variance Estimation Strata |
| _TOTAL_ | Weighting Class Strata Totals Based on Sampling Frame Counts |

### *Full Survey Dataset*

In addition to variables on the basic-survey dataset, the full survey dataset also has five additional categories of variables: (1) the raw version of survey items that appear in a collapsed form in the basic-release section, (2) the raw version of key demographic variables used in analyses that appear in a collapsed form in the basic-release section; (3) detailed variables created by the operations contractor to document operations, (4) detailed variables used in sampling, and (5) detailed variables used in weighting. Variables are grouped in these categories in Appendix F, G and H.

***Privacy Act confidential variables—survey data.*** This section of the full survey dataset contains the original survey variables that had a recoded version in the basic-survey dataset. To the extent possible, recoded versions of these variables are in the basic-release file section under variables constructed for analysis.

***Privacy Act confidential variables—analysis data.*** This section of the full survey dataset contains the analytic variables constructed by DMDC. To the extent possible, recoded versions of these variables are in the basic-survey dataset section under variables constructed for analysis.

***Privacy Act confidential variables—operations data.*** This section of the full survey dataset contains operational variables created by the operations contractor. These variables are useful for methodological studies and/or were used in determining eligibility and response status.

The identifying variables describe how the record was processed once a survey was returned. The variables BATCH, SERIAL, and LITHO uniquely identify each returned survey. LITHO is the lithocode scanned from the survey. BATCH and SERIAL are the codes printed on

[11] Two additional variables required for SUDAAN are on the dataset: NPSTRAT, poststratification population counts; and, PSTRATA, poststratification strata.

the survey during scanning to identify the scan batch number and scan order of each survey. These numbers can be used to retrieve the paper copy of a survey for a short time after it has been scanned (e.g., should researchers want to check electronically-stored information against the respondent's answer on the paper survey). DUPRET and DUPRET2 indicate the receipt of multiple returns. DUPRET2 includes blank returns in the multiple counts; DUPRET excludes these returns.

The classification variables describe how individual sample member's records were grouped and indexed. FALG_FIN indicates the final disposition status of a sample member (i.e., survey returned, blank survey returned, not locatable, or no return). Several other classification variables were used to categorize a survey's final disposition. These variables are: BLKREAS, SCSINEL, and REFUSE. BLKREAS codes the reason given by the sample member for returning a blank survey, SCSINEL indicates the reason given by the sample member for being ineligible, and REFUSE indicates whether a sample member refused to complete a survey.

***Privacy Act confidential variables—sampling and record data.*** This section of the full survey dataset contains administrative file variables and constructed variables used in determining the sampling design. It also includes the sampling strata identifiers and counts.

***Confidential variables—weighting.*** This section of the full survey dataset contains variables used in analysis of non-response and in the construction of the weights.

## *Using Appendix H*

Regardless of whether analysts use all or only portions of the database, all analysts should replicate the results found in the tables in H. It is only by replicating these results that analysts can be sure that they are reading the data correctly. An annotated example of an H table is listed in Figure 4. (However, table does not reflect actual results.)

**Figure 4.**
***Annotated Example of a Table from G***

[1]2006 Survey of Reserve Component Spouses

Were your parent(s)/guardian(s) in a regular Reserve Component Service and/or National Guard/Reserve?

[2]SR015 [3]Were your parent(s)/guardian(s) in a regular Reserve Component Service and/or National Guard/Reserve?

OS DATA[4]

| COLS | LENGTH |
|---|---|
| NA-NA | NA |

SAS DATA[5]

| FORMAT NAME | TYPE | LENGTH | INFORMAT |
|---|---|---|---|
| SR079_ | NUM | 3 | STDOS2 |

| FREQ[6] | PERCENT[7] | OS VALUE[8] | SAS VALUE[9] | MEANING[10] |
|---|---|---|---|---|
| 693 | 1.9 | -9 | . | No response |
| 2 | 0.0 | -8 | .A | Multiple response error |
| 23419 | 65.0 | -1 | .B | No survey return |
| 2135 | 5.9 | 1 | 1 | Yes, while I was growing up |
| 3089 | 8.6 | 2 | 2 | Yes, but only before I was born |
| 6716 | 18.7 | 3 | 3 | No |
| 36054 | 100.1 | TOTALS[11] | | |

[12] PERCENT TOTAL DOES NOT = 100 DUE TO ROUNDING ERROR.

[13]G-2

1. **Codebook title and item text.** The codebook title is the same for every table in Appendix H of this codebook. It lists survey name. If applicable, the indented text under the title presents the verbatim Question or instructions that accompany a specific item in the survey.

2. **Variable name.** The variable name for a survey item is up to eight characters in length and corresponds to the variable name that is used in the SAS®-based, basic-release data file. The conventions for naming survey-derived variables are documented in Appendix E. Appendix F and G contains a full listing of the basic-release file variables, as well as short descriptions of what the variables document.

3. **Survey item text.** For survey items, this text is the verbatim item wording. For other variables, this text provides a verbal description of the variable.

4. **Location of the item on the OS data file.** This block provides the location of the variable on the OS data file. The OS data block documents (a) the starting and ending column numbers where the data are stored and (b) the number of columns that the data occupy.

5. **SAS data file information.** This block indicates format name, variable type (character or number), length and informat of the data in the SAS® data file. The last block indicates the informat appropriate for reading the data from the OS data file.

6. **Counts of item value responses.** This column indicates the number of sample members who fall into the category corresponding to each value for the variable. The count provided for each variable value should correspond exactly to those that analysts would obtain when running unweighted frequencies on all 36054 records in the accompanying database. Before running complex statistical analyses, analysts are encouraged to re-create these frequency tables. Re-creating the counts minimally ensures that the data are being correctly read by the analysts' computers and programs.

7. **Respondent percentages for each value.** This column indicates the percentage of sample members who marked each variable value. The percentages are calculated by dividing the row value in the "FREQ" column by the total listed at the bottom of the "FREQ" column. The percentages provided for each variable value should correspond exactly to those that analysts would obtain when running unweighted frequencies on all 36054 records in the accompanying database.

8. **Response OS values.** This column presents the OS (ASCII) code for the actual or re-coded response values for each survey item. Further details on the values in this column are found in either the annotated survey form or in E. For example, all negative values are found in Appendix E.

9. **Response SAS® values.** This column presents the SAS® code for the response values for each variable. Further details on the values in this column are found in either the annotated survey form or in Appendix E. An explanation of negative values is presented in Appendix E.

10. **Explanation of the item value codes.** This column presents brief verbal explanations of the OS and SAS® coding for each survey item. If the coded information corresponds to survey response alternatives, the text in the table is the verbatim response from the survey instrument. More detailed explanations are presented in the annotated survey form (Appendix D) and in Appendix E.

11. **Total of response frequencies and percents.** The number appearing at the bottom of the "FREQ" column is the total number of sample members in the basic-release file. This number is the same for every table in this codebook. That is, every sample member in the database is accounted for on every variable even if the variable indicates only that the information was missing for that sample member. The number appearing at the bottom of the "PERCENT" column is typically 100.0. Rounding error, however, occasionally causes the total percentage to be slightly above or below 100.0.

12. **Messages to analysts.** The messages alert analysts to situations specific to a variable including (a) rounding errors resulting in a total percentage other than 100 percent; (b) the variable having values that are "too numerous to list;" (c) extraction of the

variable from another specified database; (d) creation of the variable from two or more variables specified in the message; and (e) further clarification of the survey item corresponding to the variable.

13. **Codebook page number.** This is the H page number corresponding to a specific variable. F and G identifies the page number in H where the variable can be found.

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**14. ABSTRACT**

The 2006 Survey of Reserve Component Spouses (2006 RCSS) is part of the 2006 Survey of Military Spouses project. The 2006 RCSS was designed to measure the attitudes and opinions of spouses regarding a wide-range of issues including demographic information, marital history, employment status, feelings about military life, use of military programs and services, and number and age of children or other legal dependents. This report documents how the survey was fielded and the creation of reporting variables.

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Survey, Reserve Component Members, Reserve Component Spouses, Demographics, Preparedness, Children/Legal Dependents, Health and Well Being, Employment Status, National Guard/Reserves, and Programs and Services.

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